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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/500,055

01/03/2005

Hideo Onuki

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EXAMINER

MCNALLY, DANIEL

ART UNIT

PAPER NUMBER

1791

MAIL DATE

DELIVERY MODE

09/17/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/500,055	<b>Applicant(s)</b> ONUKE, HIDEO	
	<b>Examiner</b> DANIEL MCNALLY	<b>Art Unit</b> 1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12 August 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 5-10 is/are pending in the application.
- 4a) Of the above claim(s) 2 and 3 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 5-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

1. Please note claims 2 and 3 are withdrawn from further consideration. In future correspondence the status identifiers used for claims 2 and 3 should be --(Withdrawn)--.

#### ***Continued Examination Under 37 CFR 1.114***

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 8/5/2008 has been entered.

#### ***Claim Objections***

3. Claim 6 is objected to because of the following informalities: Claim 6 includes a typographical error "(TEDS)" should be replaced with --(TEOS)--. Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim 10 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 10 recites the limitation "the other material". There is insufficient antecedent basis for this limitation in the claim. It is unclear what material "the other

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material” is referring to because neither claims 1 nor 2 discloses what material is the other material. It is recommended the claims actively recite what material is considered to be the other material.

***Claim Rejections - 35 USC § 103***

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

7. Claims 1 and 5-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura (US2003/0116273, of record, previously cited, herein “Nakamura”) in view of Noda (US6824897, of record, previously cited, herein “Noda”) and Hirayama et al. (US6655433, of record, previously cited, herein “Hirayama”).

Nakamura discloses a method of bonding optical parts. The method consists of providing optical parts, wherein the optical parts can be glass, quartz glass or oxide glass, the glass is inherently transparent to ultraviolet light because it is the same material used in the claims, interposing an alkoxide in the form of a primer and an adhesive between the two materials to be bonded, contacting the parts to be bonded and curing the adhesive using ultraviolet radiation to form a bond (paragraphs 0051-0070). While Nakamura discloses the parts are pressed together, it is unclear if Nakamura is pressing while using ultraviolet energy to cure the adhesive. Furthermore, Nakamura is silent as to using a nitrogen or rare earth atmosphere during the ultraviolet irradiation step. With regard to the wavelength of the ultraviolet light, one of ordinary skill in the art would have readily appreciated selecting a wavelength that is most efficiently absorbed

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by the adhesive, and it is inherent the wavelength of the ultraviolet light is the same as the claimed wavelength because the same materials are being irradiated.

Noda discloses a method for bonding articles. The method consists of providing a first and second substrate, providing a bonding layer between the substrates, pressing the substrates together and drying the bonding agent to bond the substrates together (column 1, lines 43-62; column 3, lines 15-23).

Hirayama discloses a method of curing an ultraviolet curable resin on an optical part. Hirayama discloses using an apparatus comprising a ultraviolet ray applying member, a chamber, and a gas introducing pipe for introducing inert gas such as nitrogen gas into the chamber between the ultraviolet ray applying member and the part to be irradiated (column 3, lines 28-35). Nitrogen gas is used to fill the chamber where the ultraviolet light is irradiated to cure the resin, so that the oxygen is removed from between the ultraviolet source and the part so that the ultraviolet hardening of the resin is improved (column 1, lines 51-67; column 7, lines 54-60).

It would have been obvious to one of ordinary skill in the art at the time of invention to modify the method of Nakamura by pressing the parts to be bonded together as taught by Noda in order to reduce the thickness of the adhesive layer and to hold the parts in contact, and to modify Nakamura by performing the ultraviolet radiation while the irradiate parts are located inside a nitrogen gas atmosphere as taught by Hirayama in order to improve the ultraviolet hardening.

With regard to claim 5, Nakamura and Noda disclose the materials can be quartz glass.

With regard to claim 6, Nakamura discloses the adhesive comprises silicon alkoxide (paragraph 0063).

With regard to claim 7, Nakamura discloses the adhesive and primer comprise a metal alkoxide (paragraphs 0054, 0063).

With regard to claim 8, Noda discloses pressing the bonding surfaces against each other in the vertical direction (column 3, lines 15-23).

With regard to claim 9, Nakamura and Noda do not require applying ultraviolet radiation before pressing the parts together.

With regard to claim 10, Nakamura discloses the materials can be common glass.

### ***Response to Arguments***

8. Applicant's arguments filed 8/12/2008 have been fully considered but they are not persuasive. Applicant argues the adhesive layer formed between the optical parts of Nakamura is different from the claimed adhesive because the adhesive of Nakamura includes a silane. This argument is not commensurate with the scope of the claims. The claims merely require placing an alkoxide between two materials; the claim does not preclude the alkoxide from being in a mixture with other components. Nakamura discloses applying a primer and adhesive, both of which comprise alkoxide, which is considered to satisfy the requirement of interposing an alkoxide.

Applicant argues the adhesive of Nakamura does not transmit ultraviolet light having a wavelength of 200nm or shorter therethrough. This argument is also not commensurate with the scope of the claim. The claims do not limit the adhesive to

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require it is capable of transmitting UV light at a wavelength of 200nm or less. Applicant asserts the important feature of the present invention is to provide adhered quartz plates which allow ultraviolet light having a wavelength of 200nm or shorter to transmit through the adhered quartz plates. However the claims do not require the important features, nor do they require both of the materials to be quartz plates, furthermore one of the plates can be common glass or inorganic common glass (claim 10) which do not transmit ultraviolet light having a wavelength of 200nm or shorter (specification page 5). If one of the materials being bonded cannot transmit ultraviolet light having a wavelength of 200nm or shorter, there is no benefit to having an adhesive that can transmit ultraviolet light having a wavelength of 200nm or shorter since it will simply be absorbed by the materials. The claims do not differentiate the claimed alkoxide from the adhesive comprising an alkoxide in Nakamura. The arguments directed toward the adhesive of Nakamura not being able to transmit ultraviolet light at a wavelength of 200nm or shorter is not commensurate with the scope of the claims.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANIEL MCNALLY whose telephone number is (571)272-2685. The examiner can normally be reached on Monday - Friday 8:00AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Daniel McNally/  
Examiner, Art Unit 1791

/John L. Goff/  
Primary Examiner, Art Unit 1791

/DPM/  
September 3, 2008